

# MATERIAL SAFETY DATA SHEET

## Arachidonoyl-1-Thio-Glycerol

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Cayman Chemical Company  
1180 E. Ellsworth Rd.  
Ann Arbor, MI 48108

Printed: 11/11/2009  
Revision: 11/10/2009  
Supersedes Revision: 03/11/2007  
Date Created: 08/02/2006

### 1. Product and Company Identification

**Product Code:** 10007904  
**Product Name:** Arachidonoyl-1-Thio-Glycerol  
**Manufacturer Information**  
**Company Name:** Cayman Chemical Company  
**Emergency Contact:** Cayman Chemical Company (800)364-9897  
**Information:** Cayman Chemical Company (734)971-3335  
**Synonyms:** 5Z,8Z,11Z,14Z-eicosatetraenyl,1-thio glycerol; 1-S-Arachidonoyl-1-mercapto-2,3-propanediol

### 2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TLV	Other Limits
1. Arachidonoyl-1-Thio-Glycerol	NA	1.0 %	No data.	No data.	No data.
2. Acetonitrile	75-05-8	99.0 %	40 ppm	20 ppm	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Arachidonoyl-1-Thio-Glycerol	NA	No data.	No data.	No data.	No data.
2. Acetonitrile	AL7700000	No data.	No data.	No data.	No data.

### 3. Hazards Identification

**Emergency Overview:** No data available.  
**Route(s) of Entry:** Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection  
**Potential Health Effects (Acute and Chronic):** The hazards identified with this product are those associated with the solvent(s).  
Can cause fatal cyanide poisoning.  
Irritant.  
Material is irritating to the mucous membranes and upper respiratory tract.  
May be fatal if swallowed, inhaled, or absorbed through skin.  
May cause eye, skin, or respiratory system irritation.  
Several hours may elapse from exposure to onset of symptoms.  
The toxicological properties of this compound have not been fully evaluated.  
**LD 50 / LC 50:** Please refer to Section 11  
**Signs and Symptoms Of Exposure:** Treat as cyanide poisoning.  
Always have on hand a cyanide first-aid kit, together with proper instructions.  
The onset of symptoms is generally delayed pending conversion to cyanide.  
Nausea, vomiting, diarrhea, headache, dizziness, rash, cyanosis, excitement, depression, drowsiness, impaired judgement, lack of coordination, stupor, death.  
**Medical Conditions Generally Aggravated By Exposure:** Those with history of central nervous system, heart or lung diseases, or liver, kidney, or thyroid problems may be more susceptible to the effects of this substance.

### 4. First Aid Measures

**Emergency and First Aid Procedures:** If inhaled remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.  
Do not give direct mouth-to-mouth if victim ingested or inhaled this substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.  
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.  
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 20 minutes. Have eyes examined and tested by medical personnel.  
In case of skin contact, immediately wash skin with soap and plenty of water. Remove

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contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

**Note to Physician:**

Acetonitrile is metabolized to cyanide. Patients with significant exposures must be observed for signs of cyanide poisoning and treated accordingly.

**5. Fire Fighting Measures**

**Flash Pt:**

2.00 C Method Used: Closed Cup

**Explosive Limits:**

LEL: 4.4% at 25.0 C UEL: 16% at 25.0 C

**Autoignition Pt:**

523.00 C

**Fire Fighting Instructions:**

As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

Note: Flammable as diluted in acetonitrile

**Flammable Properties and Hazards:**

Can release vapors that form explosive mixtures at temperatures at or above the flash point.

Contact with strong oxidizers may cause fire.

Container explosion may occur under fire conditions.

Emits toxic and corrosive fumes under fire conditions.

Flammable liquid.

Vapors can travel to a source of ignition and flash back.

Vapors may form explosive mixture with air.

**Extinguishing Media:**

For small (incipient), use alcohol foam, carbon dioxide, or dry chemical spray. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

**Unsuitable Extinguishing Media:**

Use water spray to cool unopened containers.

No data available.

**6. Accidental Release Measures**

**Steps To Be Taken In Case Material Is Released Or Spilled:**

Wear a NIOSH/MSHA approved self-contained breathing apparatus and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

Ensure adequate ventilation.

Remove all sources of ignition.

Evacuate personnel to safe areas.

Beware of vapours accumulating to form explosive concentrations.

Vapours can accumulate in low areas.

Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

After removal, ventilate contaminated area and flush thoroughly with water.

**7. Handling and Storage**

**Hazard Label Information:**

Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.

Wash thoroughly after handling.

**Precautions To Be Taken in Handling:**

Avoid breathing (dust, vapor, mist, gas).

Avoid contact with skin and eyes.

Avoid prolonged or repeated exposure.

Do not reuse this container.

Keep away from sources of ignition.

Use with adequate ventilation.

Wash thoroughly after handling.

**Precautions To Be Taken in Storing:**

Store at correct temperature.

**8. Exposure Controls/Personal Protection**

**Protective Equipment Summary - Hazard Label Information:**

Eye wash station in work area Lab coat Compatible chemical-resistant gloves Safety glasses Safety shower in work area Vent Hood

**Respiratory Equipment (Specify Type):**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN14387) respirator cartridges as a backup to engineering controls.

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<b>Eye Protection:</b>	Safety glasses
<b>Protective Gloves:</b>	Compatible chemical-resistant gloves
<b>Other Protective Clothing:</b>	Lab coat
<b>Engineering Controls (Ventilation etc.):</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
<b>Work/Hygienic/Maintenance Practices:</b>	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.

**9. Physical and Chemical Properties**

<b>Physical States:</b>	[ ] Gas    [ X ] Liquid    [ ] Solid
<b>Melting Point:</b>	No data.
<b>Boiling Point:</b>	No data.
<b>Autoignition Pt:</b>	523.00 C
<b>Flash Pt:</b>	2.00 C    Method Used: Closed Cup
<b>Explosive Limits:</b>	LEL: 4.4%    at 25.0 C    UEL: 16%    at 25.0 C
<b>Specific Gravity (Water = 1):</b>	No data.
<b>Bulk density:</b>	No data.
<b>Vapor Pressure (vs. Air or mm Hg):</b>	72.8 MM_HG    at 20.0 C
<b>Vapor Density (vs. Air = 1):</b>	No data.
<b>Evaporation Rate (vs Butyl Acetate=1):</b>	No data.
<b>Solubility in Water:</b>	No data.
<b>Solubility Notes:</b>	~ 0.25 mg/ml Ethanol:PBS pH 7.2 (1:2), ~ 30 mg/ml in EtOH, ~10 mg/ml in DMSO, & ~20 mg/ml in DMF.
<b>Percent Volatile:</b>	No data.
<b>Heat Value:</b>	No data.
<b>Particle Size:</b>	No data.
<b>Corrosion Rate:</b>	No data.
<b>Formula:</b>	C23H38O3S
<b>Molecular Weight:</b>	394.60
<b>pH:</b>	No data.
<b>Appearance and Odor:</b>	A clear, colorless solution

**10. Stability and Reactivity**

<b>Stability:</b>	Unstable [ ]    Stable [ X ]
<b>Conditions To Avoid - Instability:</b>	sensitive to heat protect from ignition sources
<b>Incompatibility - Materials To Avoid:</b>	acids bases oxidizing agents reducing agents alkali metals
<b>Hazardous Decomposition Or Byproducts:</b>	carbon dioxide carbon monoxide hydrogen cyanide nitrogen oxides
<b>Hazardous Polymerization:</b>	Will occur [ ]    Will not occur [ X ]
<b>Conditions To Avoid - Hazardous Polymerization:</b>	No data available.

**11. Toxicological Information**

: The toxicological effects of this compound have not been thoroughly studied.

Acetonitrile - Toxicity Data:  
 Oral LD50 (rat): 2460 mg/kg  
 Skin LD50 (rabbit): 1250 uL/kg  
 Inhalation LD50 (rat): 7551 ppm/8H  
 Dermal LD50 (rabbit): 2000 mg/kg

**Chronic Toxicological Effects:** Investigated as a tumorigen, mutagen, and reproductive effector.  
 Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.  
 See actual entry in RTECS for complete information.  
 Acetonitrile RTECS Number: AL7700000

**Carcinogenicity/Other Information:** No data available.

**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

**12. Ecological Information**

: Runoff from fire control or dilution water may cause pollution.

Toxicity to fish:  
 LC50 - Pimephales promelas (fathead minnow): 1640 mg/l 96h  
 Toxicity to daphnia and other aquatic invertebrates:  
 EC50 - Daphnia magna (Water flea): 3600 mg/l 48h  
 NOEC - Daphnia magna (Water flea): 640 mg/l 14d

**13. Disposal Considerations**

**Waste Disposal Method:** Dispose in accordance with local, state and federal regulations.

**14. Transport Information**

**LAND TRANSPORT (US DOT)**

**DOT Proper Shipping Name:** Acetonitrile  
**DOT Hazard Class:** 3  
**DOT Hazard Label:** FLAMMABLE LIQUID  
**UN/NA Number:** UN1648  
**Packing Group:** II

**AIR TRANSPORT (ICAO/IATA)**

**ICAO/IATA Proper Shipping Name:** Acetonitrile  
**UN Number:** 1648  
**Packing Group:** II  
**IATA Classification:** 3

**Additional Transport Information:** According to IATA Regulations, this product ships as an excepted quantity.  
 Transport in accordance with local, state, and federal regulations.

**15. Regulatory Information**

**US EPA SARA Title III**

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Arachidonoyl-1-Thio-Glycerol	NA	No	No	No	No
2. Acetonitrile	75-05-8	No	Yes 5000 LB	Yes	No

**US EPA CAA, CWA, TSCA**

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Arachidonoyl-1-Thio-Glycerol	NA	HAP, ODC ()	No	No	No
2. Acetonitrile	75-05-8	HAP, ODC ()	No	Inventory, 8A PAIR	No

## 16. Other Information

### Company Policy or Disclaimer

For research use only, not for human or veterinary clinical use.

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